

Open103Z User Manual

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Preparation

Basic settings of the test

- Programming Interface: SWD
- Serial port settings: Select a proper COM port, and configure as follows:
 - Baud rate : 115200;
 - Data bits : 8;
 - Stop bits : 1;
 - Parity bits : None;
 - Flow control : None
- Power supply: 5V power supply is required.
- Hardware Connection: For the tests that require the serial port converter for debugging, please connect the converter to the board via pin headers, and then connect it to the PC via USB cable.

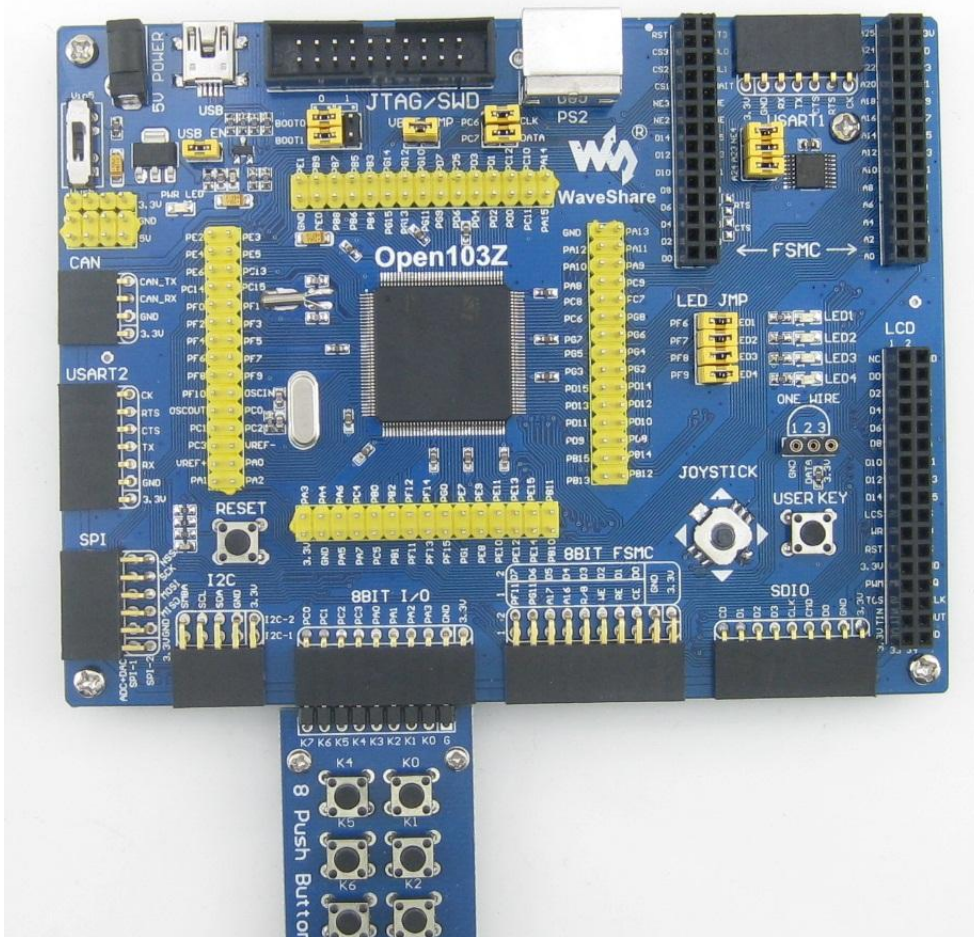
8BitIO-Pushbutton

Overview

Test the 8bit I/Os input & output by button controlling the LED.

Hardware Connection

- Connect 8 Push Buttons to the board via 8bitI/O interface. As shown in the figure below:



Operation and Result

Push the button, then the 4 LEDs will keep changing accordingly.

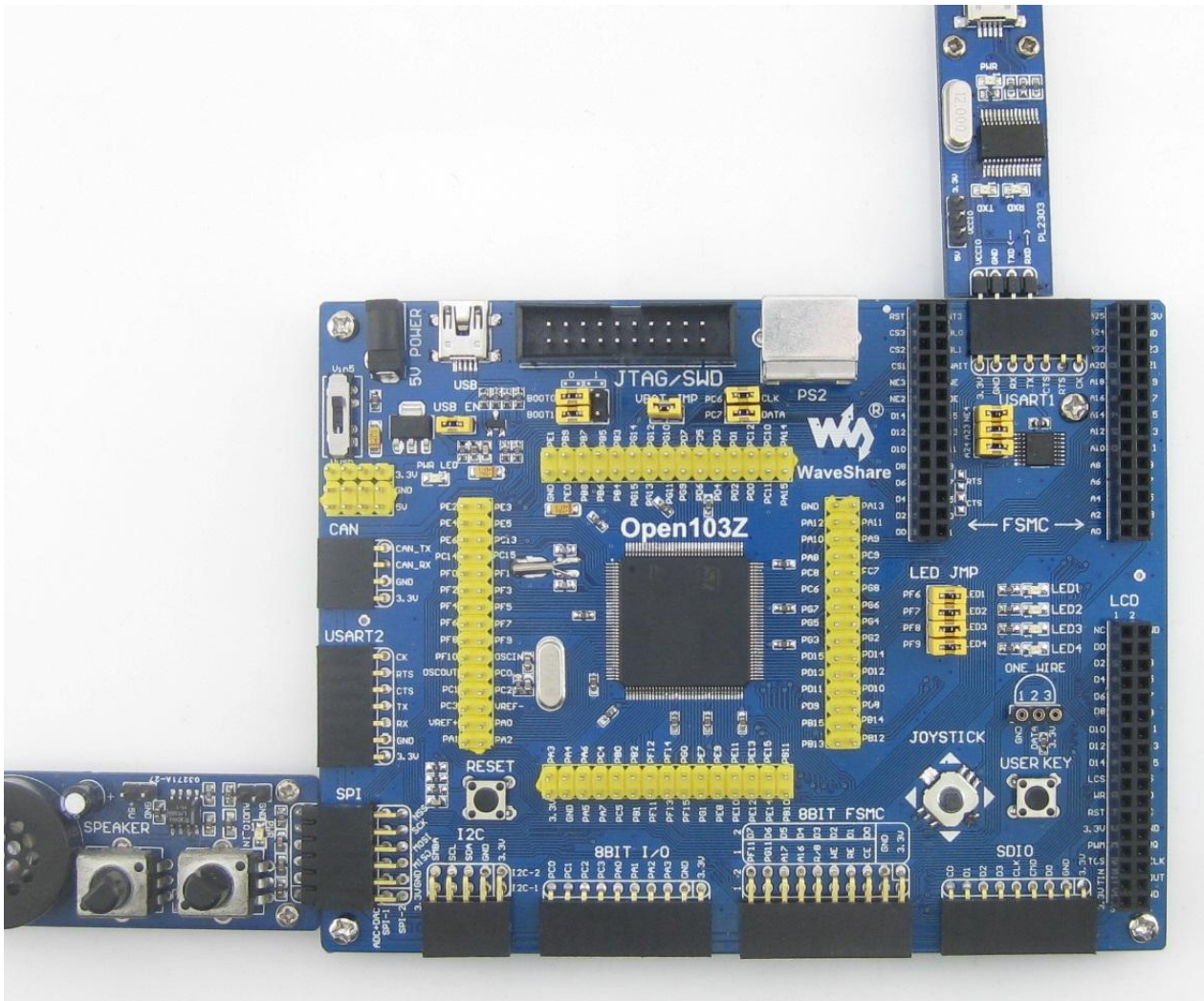
ADC+DMA

Overview

ADC analog voltage acquisition ADC

Hardware Connection

- Connect the serial port converter to the board via USART1 interface.
- Connect the Analog Test Board to the board via SPI1 interface. As shown in figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Info/message will be displayed on the serial debugging assistant as adjusting the resistor on the module.

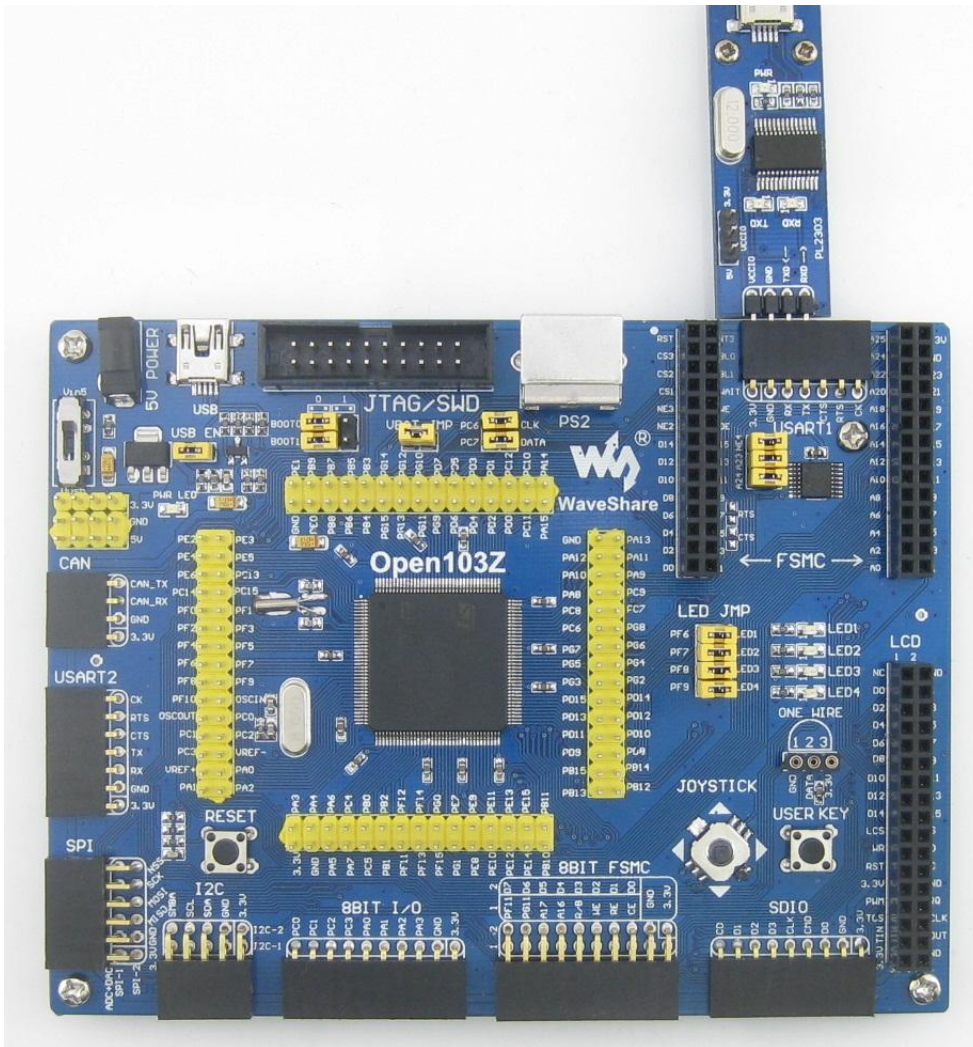
CAN-LoopBack

Overview

CAN-LoopBack Demo.

Hardware Connection

·Connect a serial port converter to the board via USART1 interface. As shown in the figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Info/message will be displayed on the serial debugging assistant.

DAC

Overview

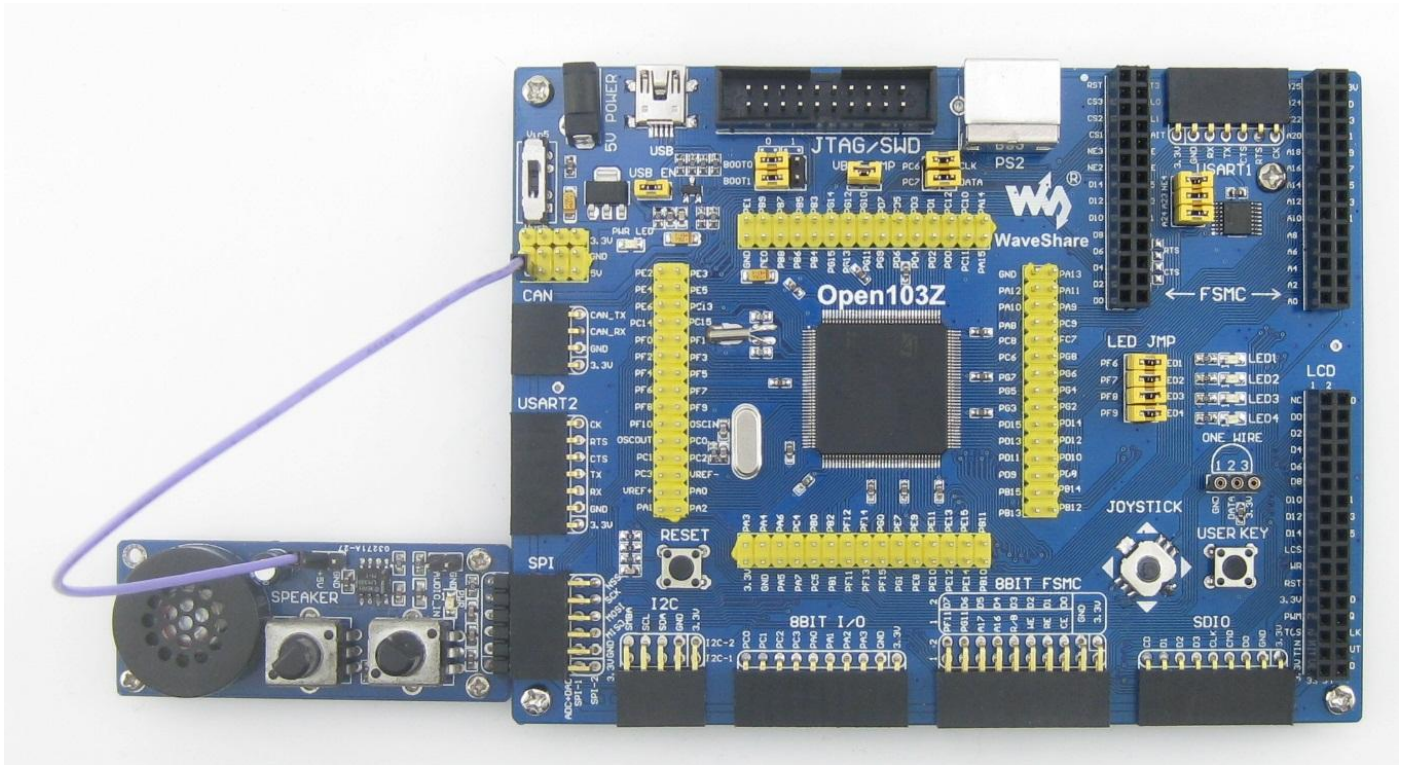
DAC output demo

Hardware Connection

·Connect the Analog Test Board to the board via SPI1 interface.

·Connect the 5V pin headers on both the main board and the Analog Test Board by jumper wire.

As shown in the figure below:



Operation and Result

There will be a sound of triangular wave from the Analog Test Board.

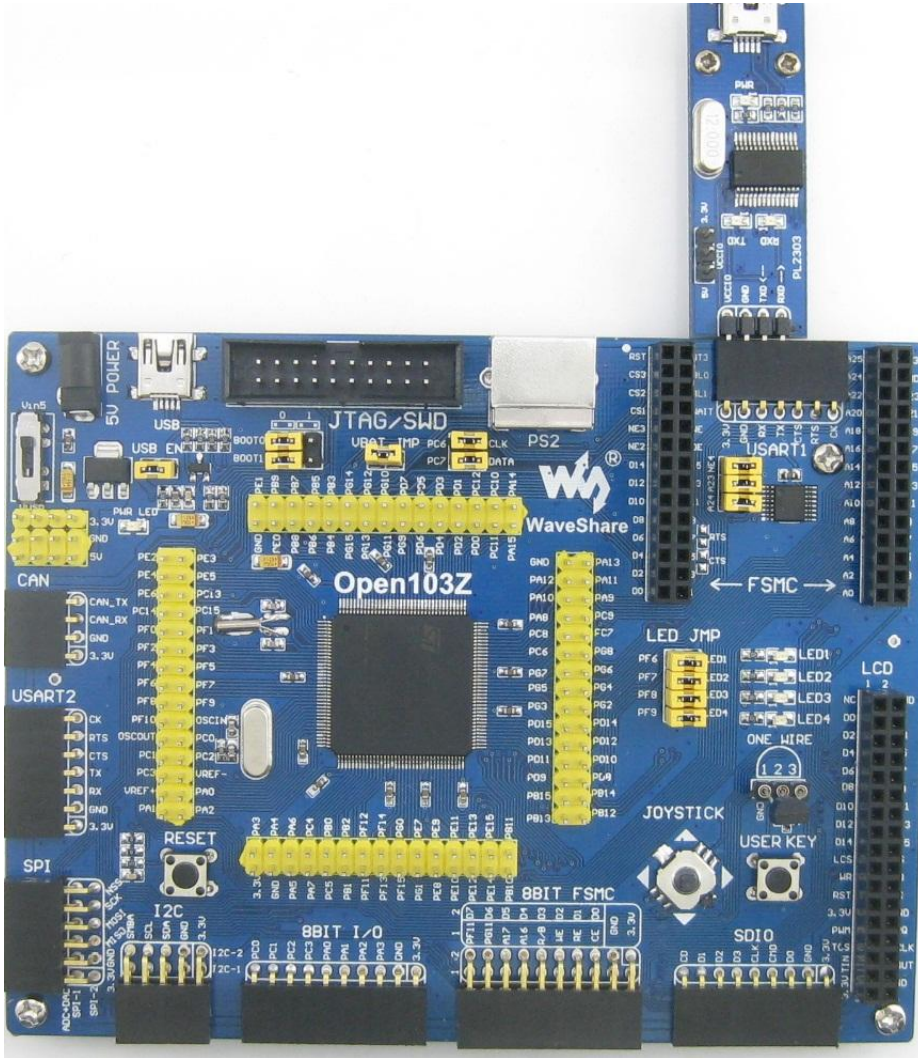
DS18B20+

Overview

DS18B20+ temperature measurement demo

Hardware Connection

- Insert the DS18B20+ to the ONE-WIRE Interface.
- Connect the serial port converter to the board via USART1 interface. As shown in the figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Info/message will be displayed on the serial debugging assistant.

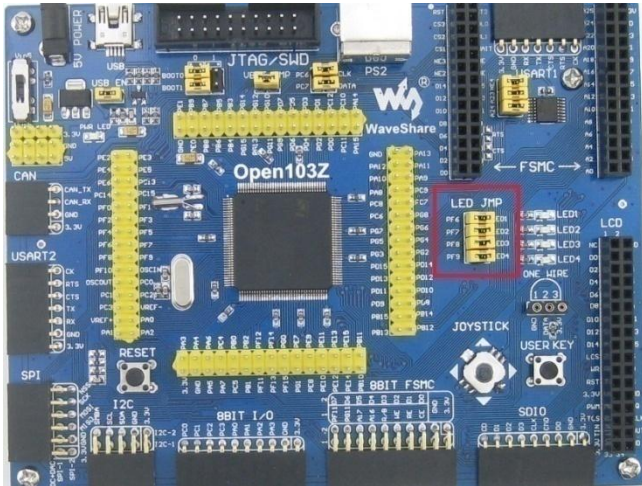
GPIO_Key_LED

Overview

LED, Push button and Joystick demo

Hardware Connection

·Short the LED jumpers on the board. As shown in the figure below:



Operation and Result

Push the button or joystick; the LED status will keep changing accordingly.

I2C

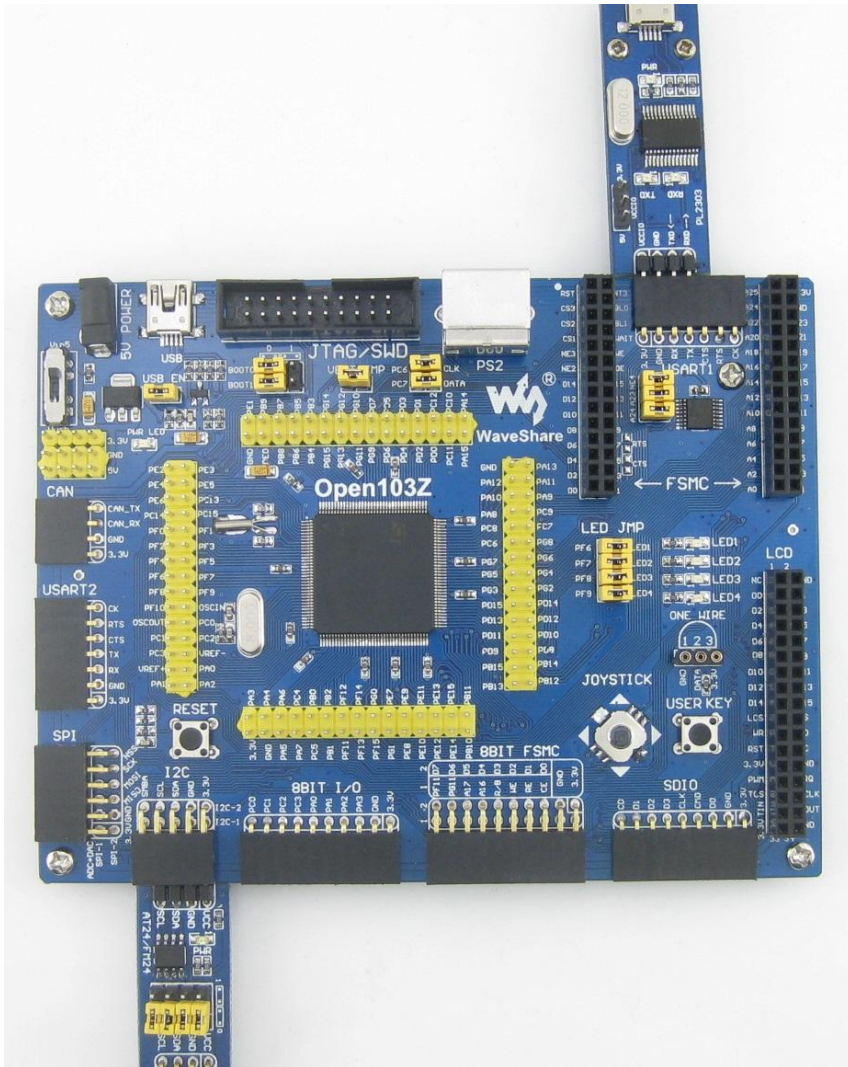
Overview

I2C EEPROM demo

Hardware Connection

- Connect the serial port converter to the board via USART1 interface.
- Connect the AT24CXX EEPROM Board to the board via I2Cx interface.

As shown in the figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Info/message will be displayed on the serial debugging assistant.

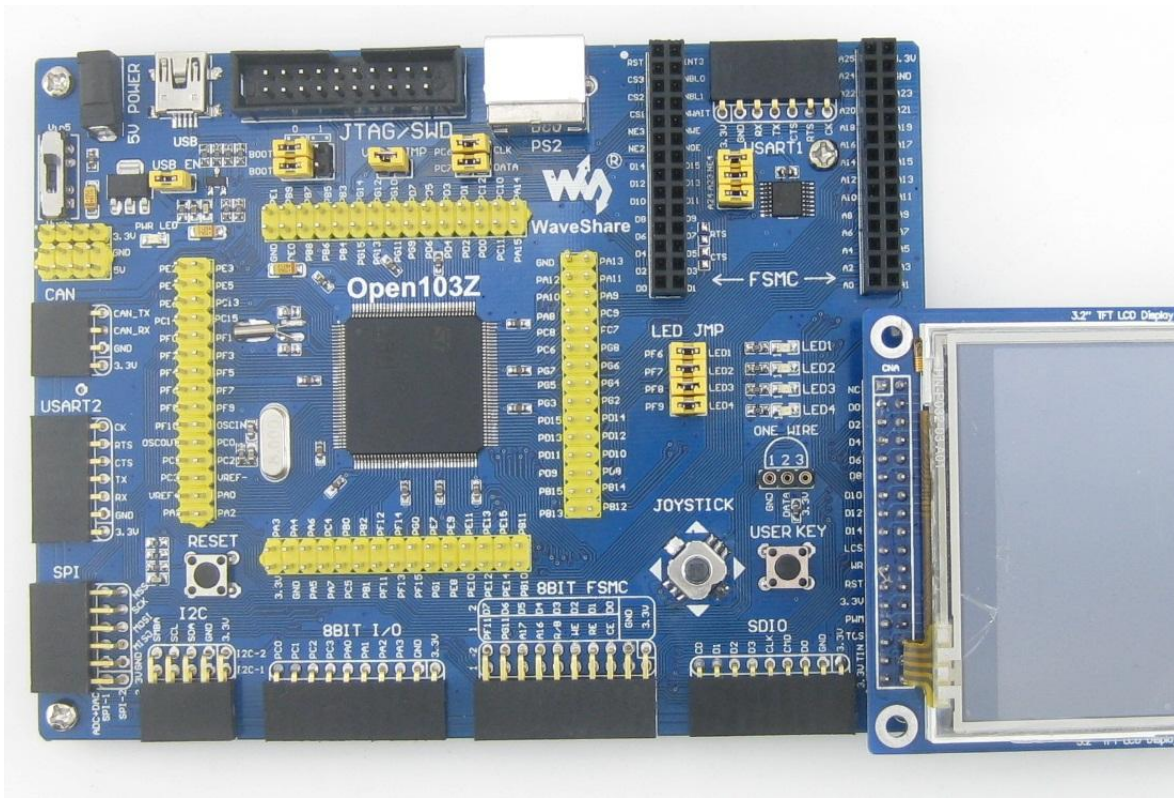
LCD-HY32D_FSMC

Overview

LCD display demo

Hardware Connection

·Connect the 3.2inch 320x240 Touch LCD (A) to the board via LCD Interface. As shown in the figure below:



Operation and Result

Information will be displayed on the LCD

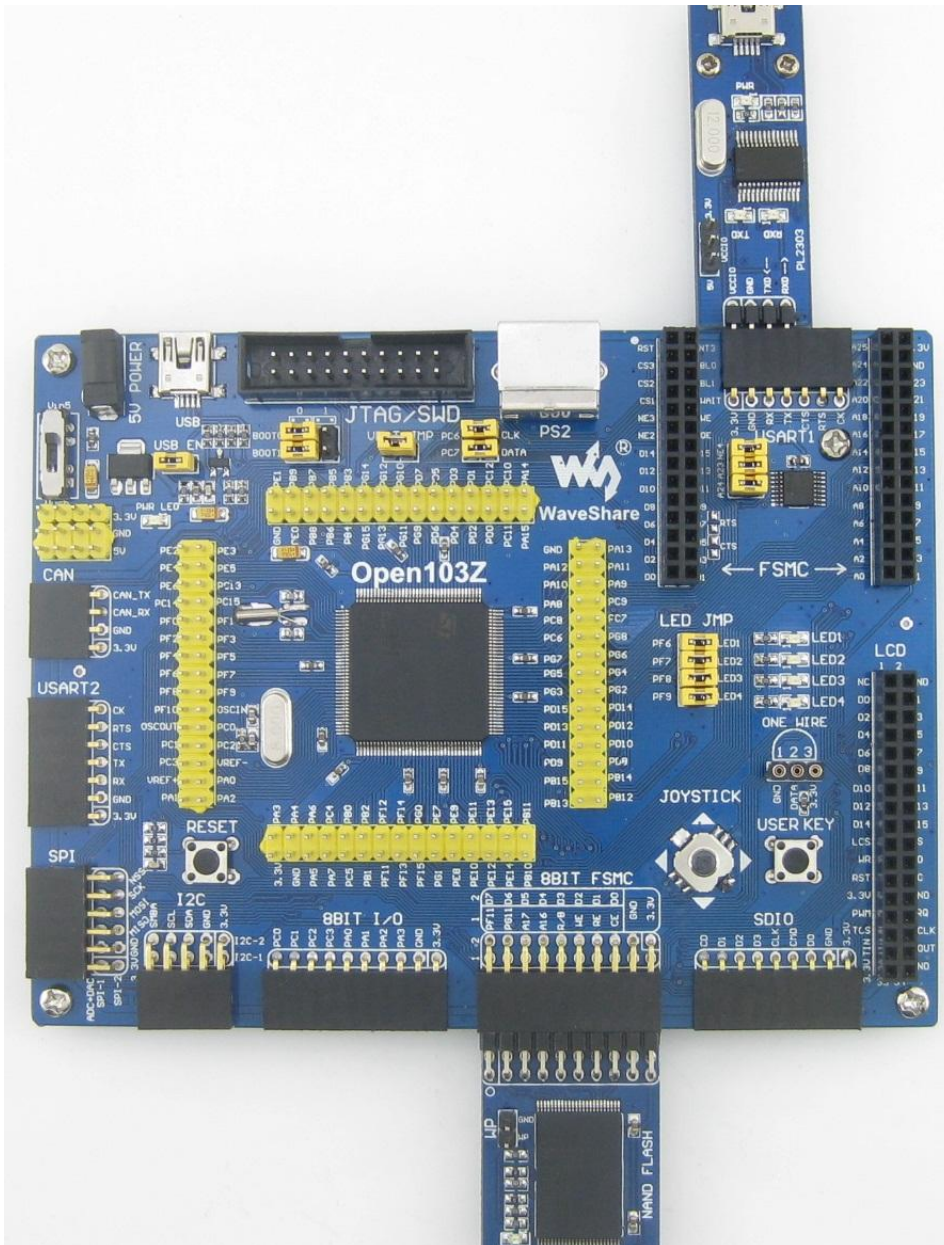
Nand Flash

Overview

Nand Flash demo

Hardware Connection

- Connect the NandFlash Board (A) to the board via 8BIT FSMC interface.
- Connect the serial port converter to the board via USART1 interface. As shown in the figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Info/message will be displayed on the serial debugging assistant.

NorFlash

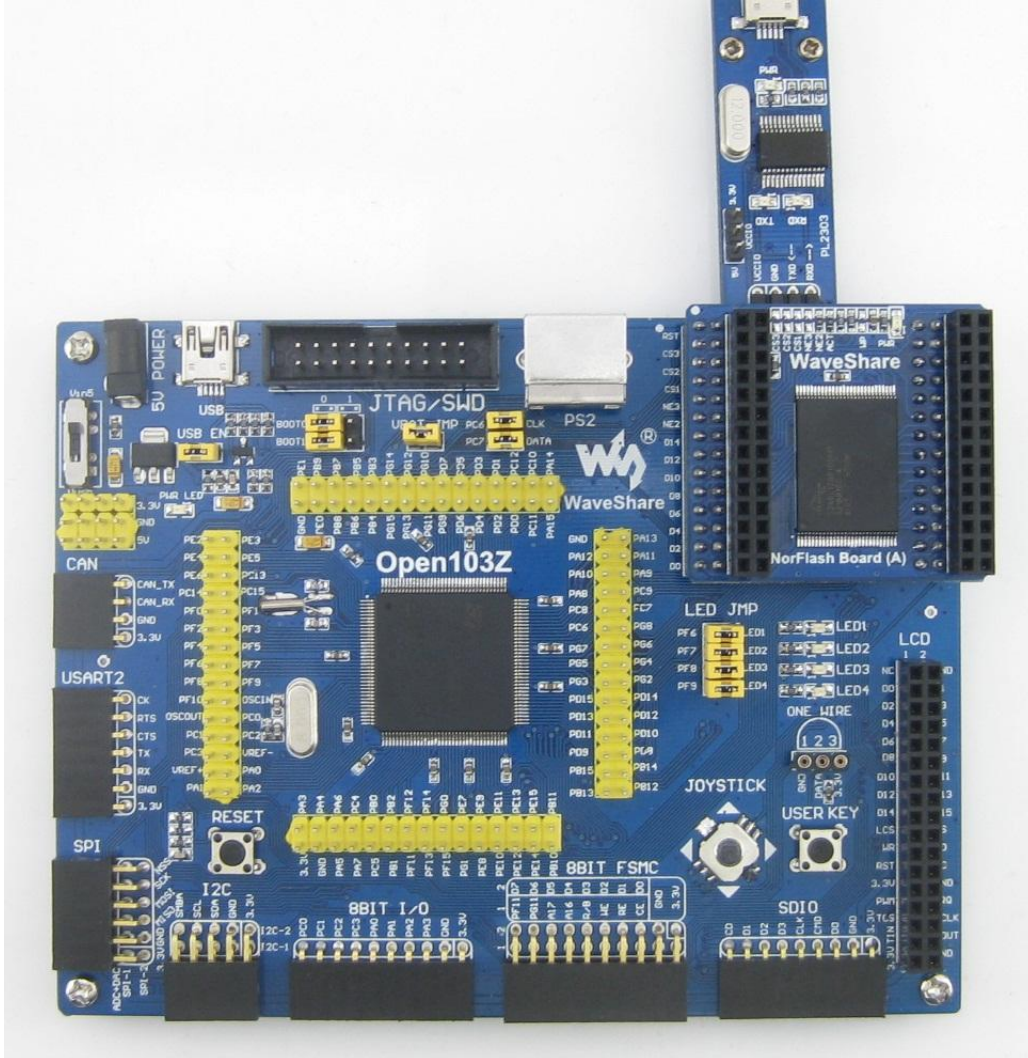
Overview

NorFlash demo

Hardware Connection

- Connect the NorFlash Board (A) to the board via FSMC interface.
- Connect the serial port converter to the board via USART1 interface.

As shown in the figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Info/message will be displayed on the serial debugging assistant.

PS2

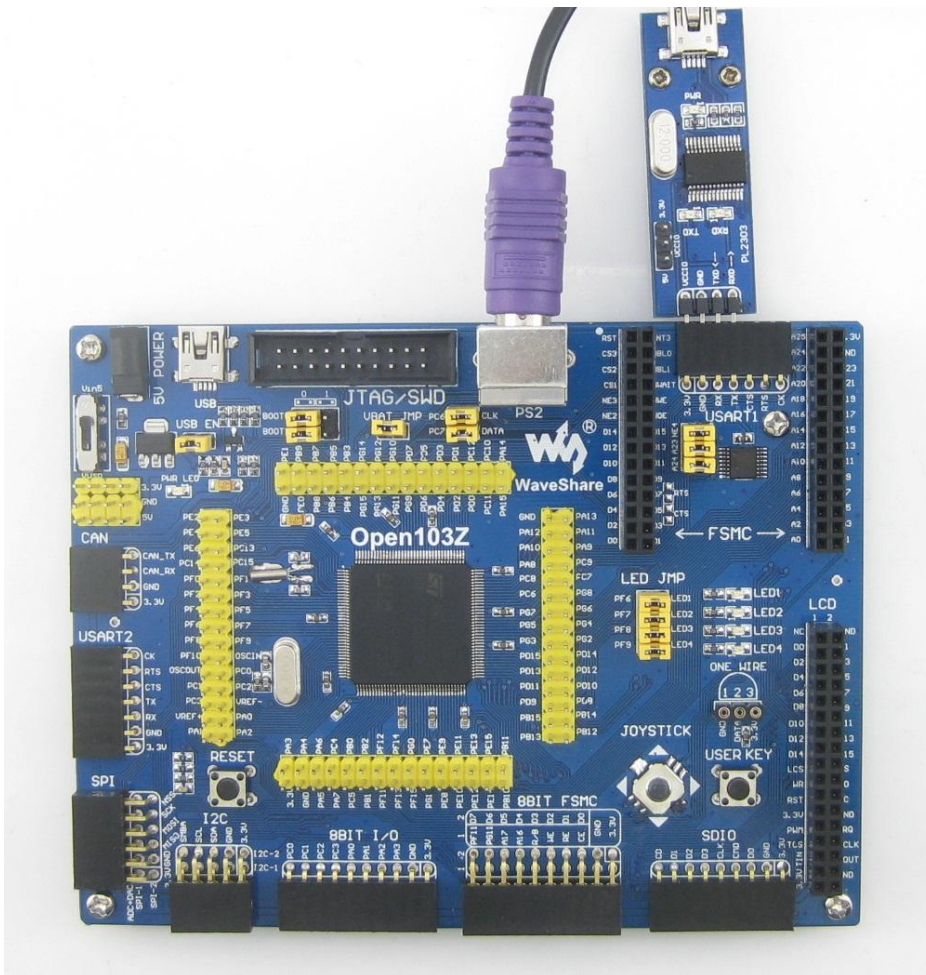
Overview

PS2 keyboard demo

Hardware Connection

- Connect the PS2 keyboard to the board via PS2 interface.
- Connect the serial port converter to the board via USART1 interface.

As shown in the figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Press any keys on the keyboard, the corresponding key value will be displayed on the serial debugging assistant.

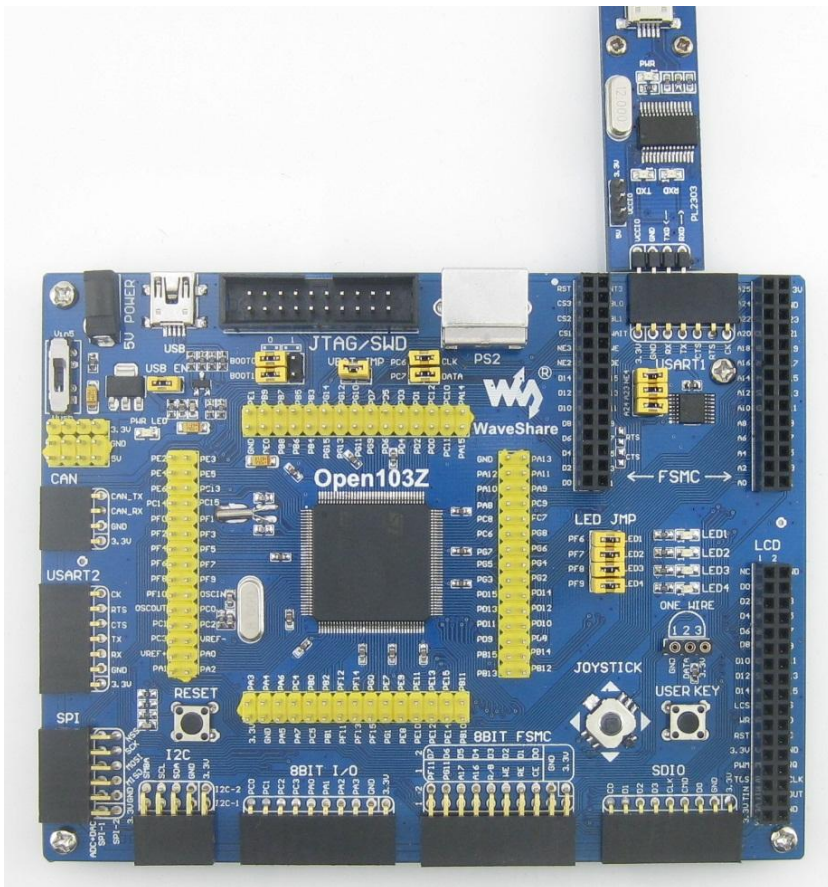
RTC

Overview

RTC demo

Hardware Connection

·Connect the serial port converter to the board via USART1 interface. As shown in the figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Follow the tips and input data, Info/message will be displayed on the serial debugging assistant.

SD_FatFS

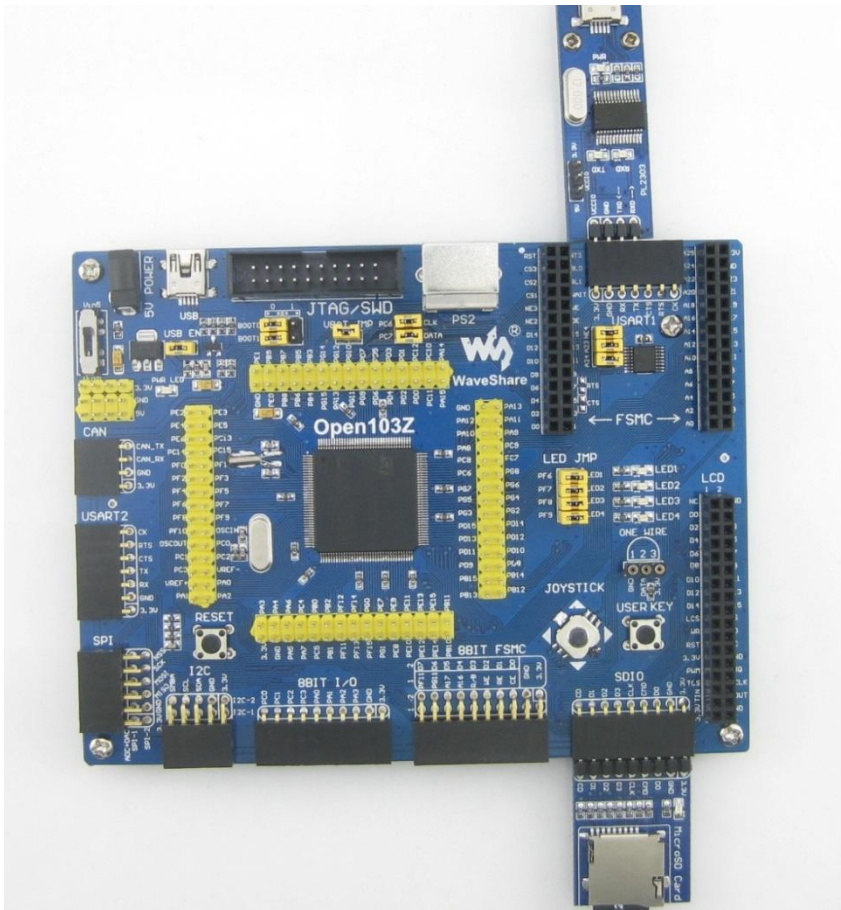
Overview

SDIO interface+ FatFS demo

Hardware Connection

- Connect the Micro SD Storage Board (with SD card) to the board via SDIO interface.
- Connect a serial port converter to the board via USART1 interface.

As shown in the figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Info/message will be displayed on the serial debugging assistant.

SDIO

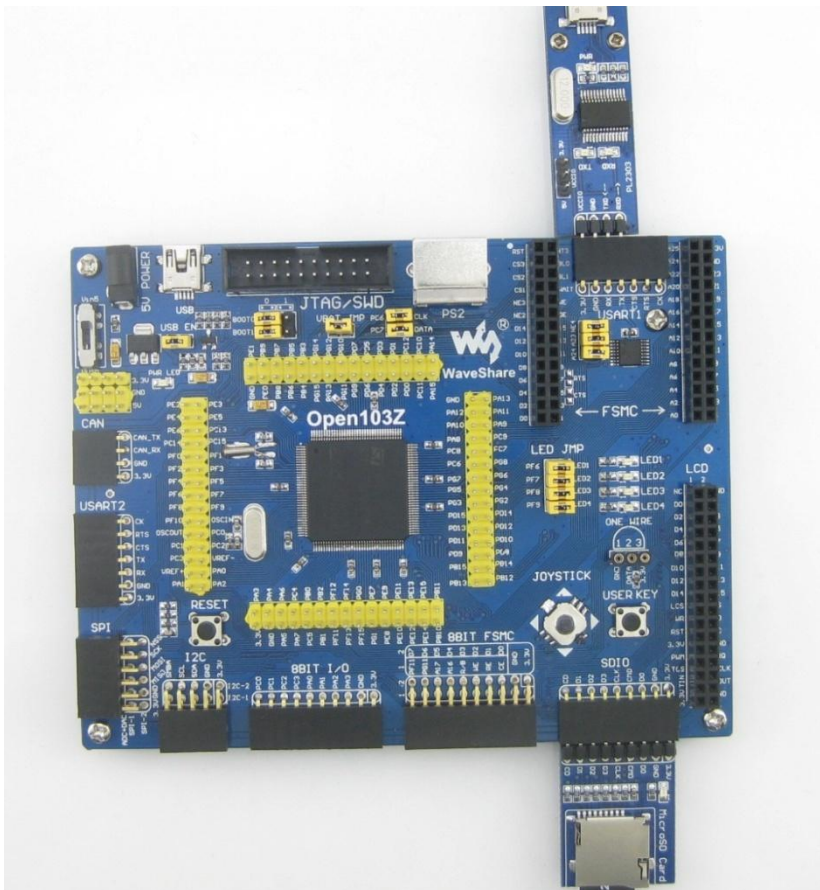
Overview

SDIO interface demo

Hardware Connection

- Connect the Micro SD Storage Board (with SD card) to the board via SDIO interface.
- Connect a serial port converter to the board via USART1 interface.

As shown in the figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Info/message will be displayed on the serial debugging assistant.

SPI

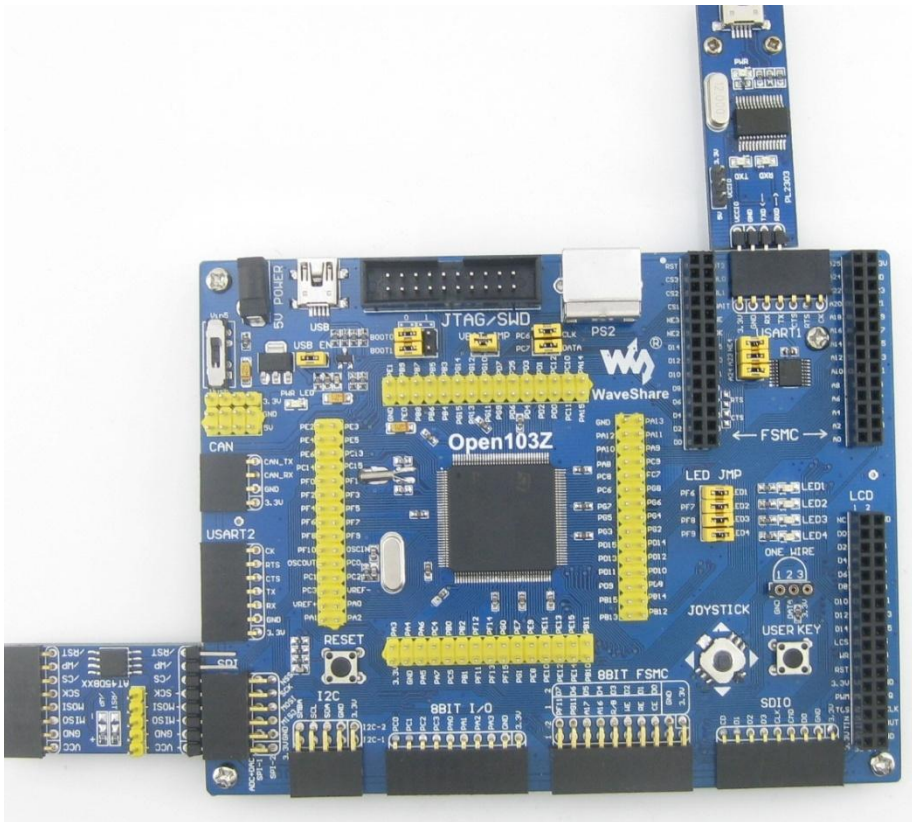
Overview

SPI Flash demo

Hardware Connection

- Connect the serial port converter to the board via USART1 interface.
- Connect the AT45DBXX DataFlash Board to the board via SPIx interface.

As shown in the figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Info/message will be displayed on the Serial debugging assistant.

SRAM

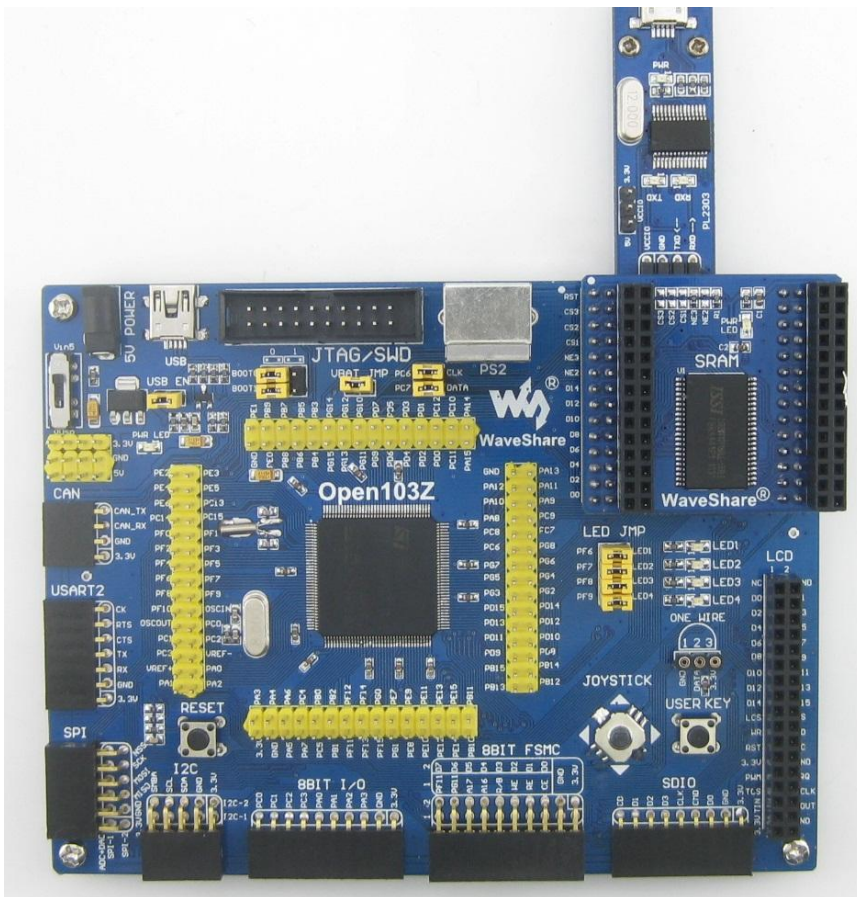
Overview

SRAM demo

Hardware Connection

- Connect the IS62WV12816BLL SRAM Board to the board via FSMC interface.
- Connect the serial port converter to the board via USART1 interface.

As shown in the figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Info/message will be displayed on the Serial debugging assistant.

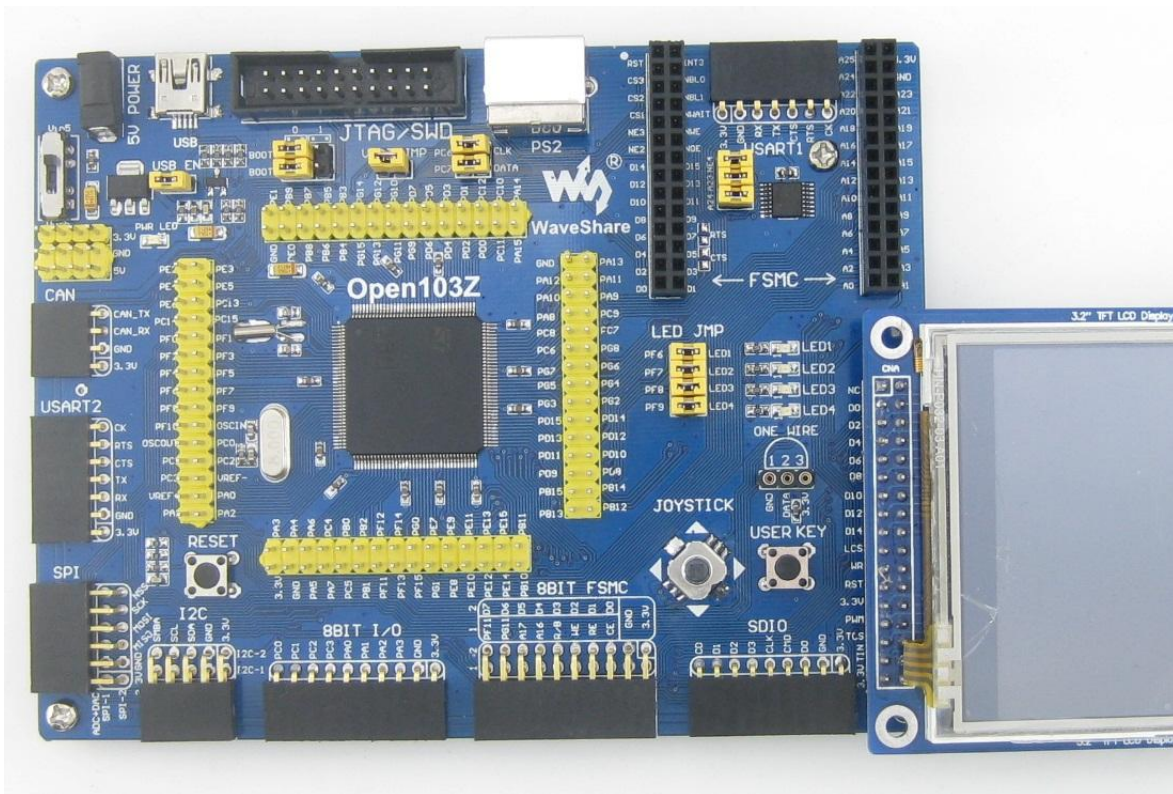
TouchPanel

Overview

LCD touch screen demo

Hardware Connection

·Connect the 3.2inch 320x240 Touch LCD (A) to the board via LCD interface. As shown in the figure below:



Operation and Result

LCD touch screen function works, and allows writing and drawing on the LCD.

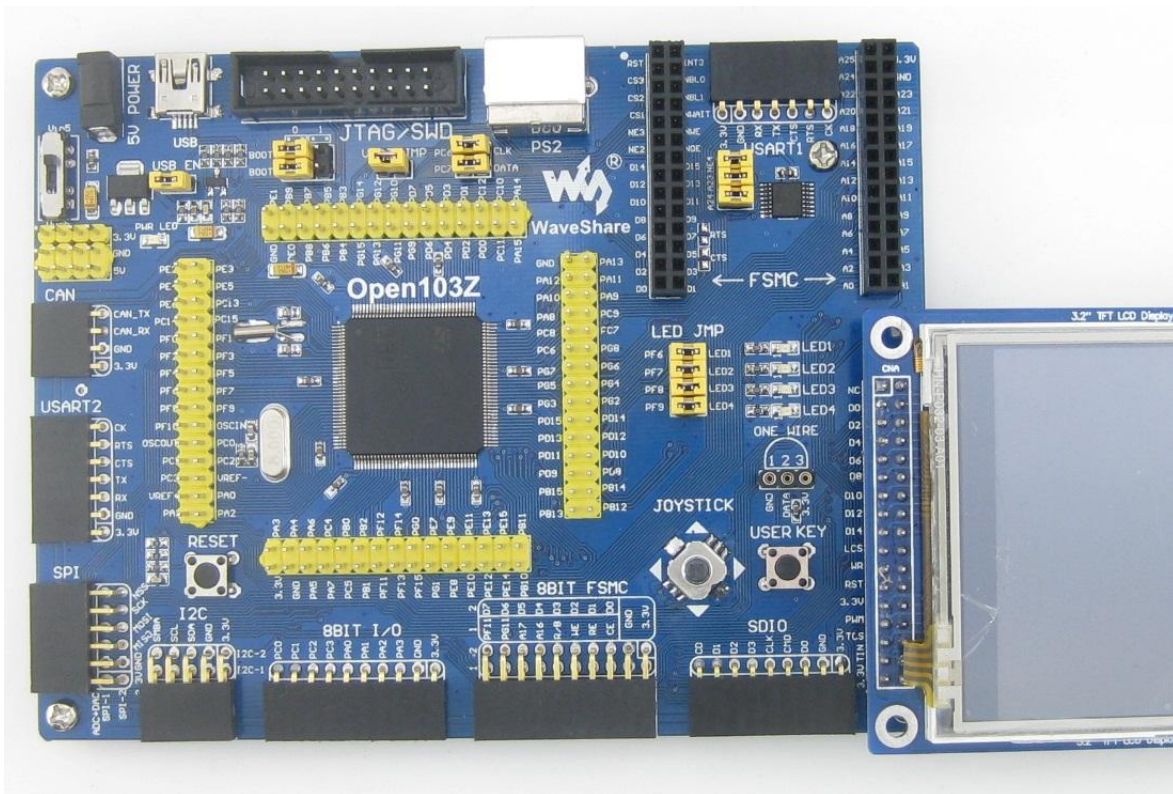
UcosII2.91+UCGUI3.90A

Overview

UcosII2.91+UCGUI3.90A demo

Hardware Connection

·Connect the 3.2inch 320x240 Touch LCD (A) to the board via LCD Interface. As shown in the figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Info/message will be displayed on the uCOSView-V310G and LCD.

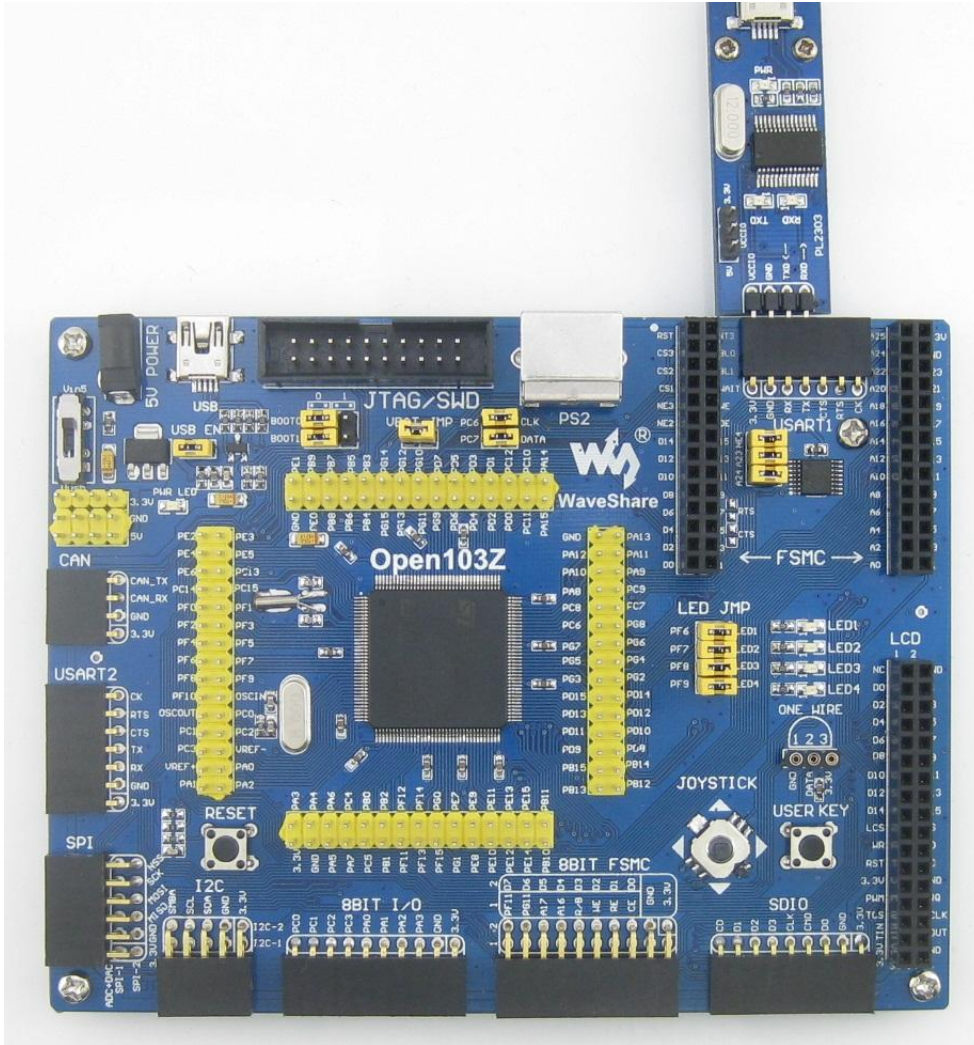
USARTx_prntf

Overview

USART serial port demo

Hardware Connection

·Connect the serial port converter to the board via USART1. As shown in the figure below:



Operation and Result

Launch the serial debugging assistant, and configure it as described in chapter "Preparation".

Info/message will be displayed on the Serial debugging assistant.

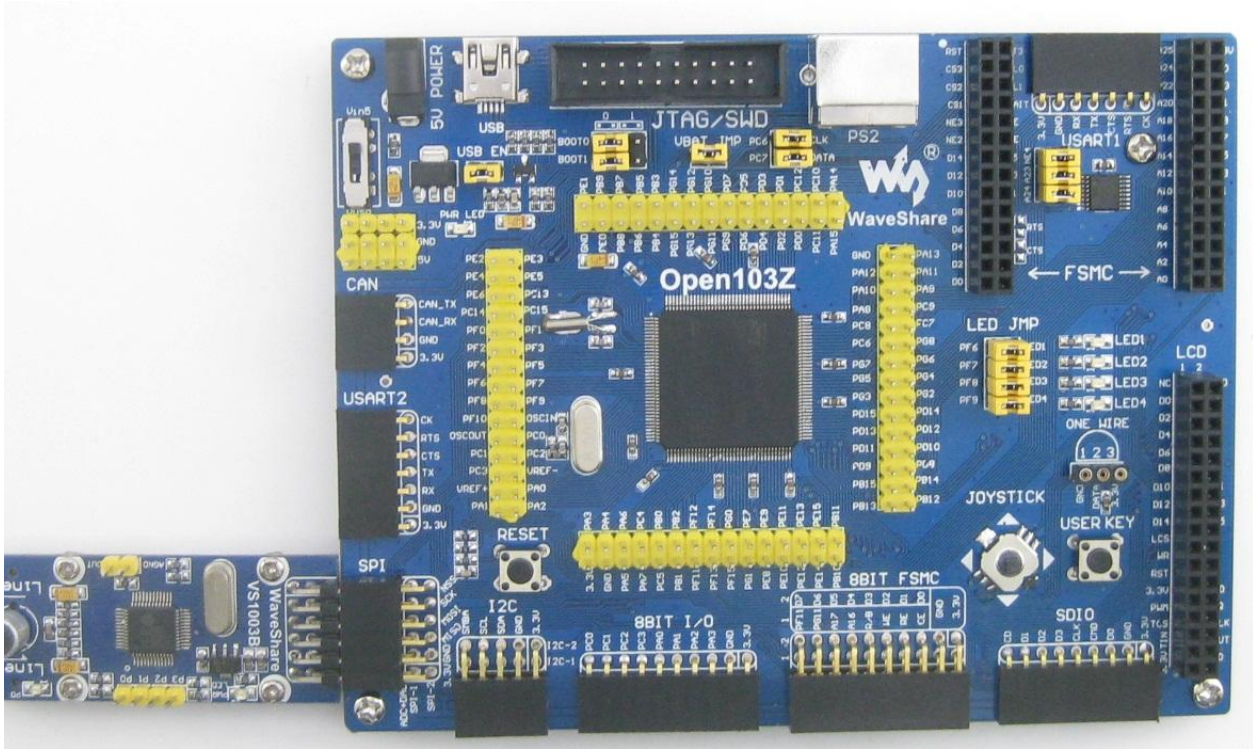
VS1003B MP3 Board

Overview

VS1003B MP3 Board demo

Hardware Connection

- Connect VS1003B MP3 Board to the board via SPI interface. As shown in the figure below:



Operation and Result

- Insert the headphone to the Line Out port.
- Connect the PC audio port and the VS1003B MP3 Board Line In port by audio cable.
- Play music on the PC side, then
 - VS1003 (GPIO): P0 LED keeps blinking;
 - VS1003 (line in): Music will be heard from PC;
 - VS1003 (line out): Music will be heard from MCU FLASH;
 - VS1003 (record): Sound can be heard from the Mic onboard

USB FS Example

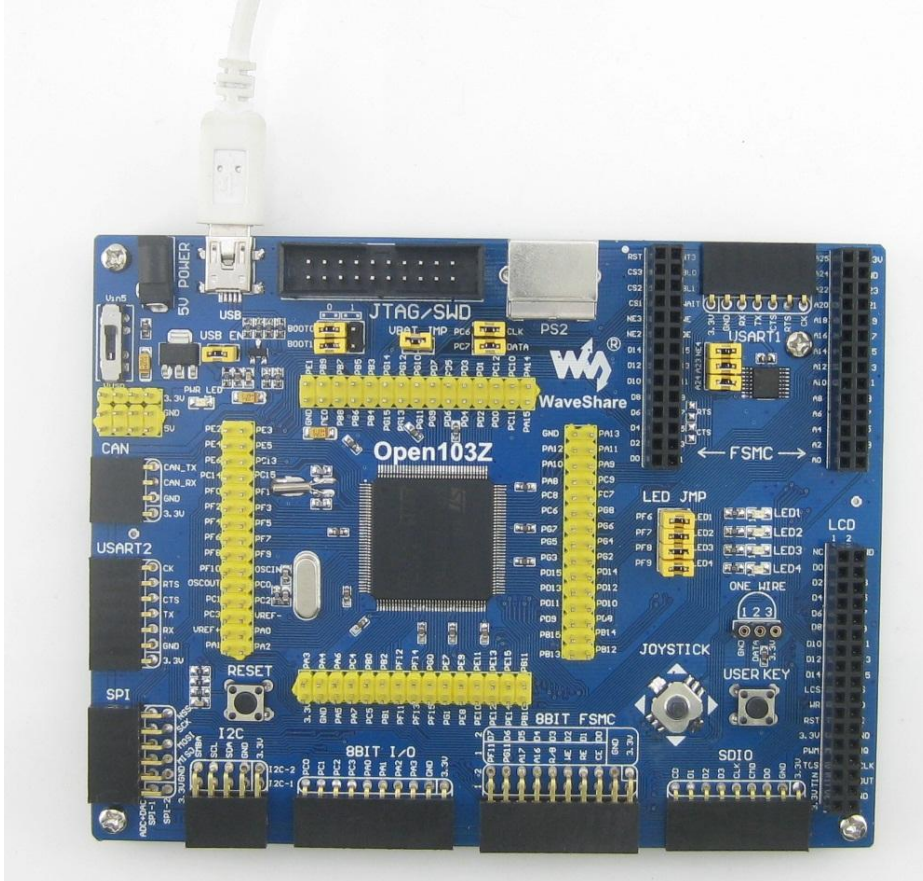
Overview

USB FS demo

Hardware Connection

- Connect the board to the PC via USB cable.
- Short the Joystick, LED jumpers.

As shown in the figure below:



Operation and Result

- (1) USB-Joystick Mouse: JOYSTICK can be used for simulating the mouse and controlling movement of the computer and mouse.
- (2) USB-Mass Storage-MCU Flash: MCU flash will be identified as USB flash drive in PC.

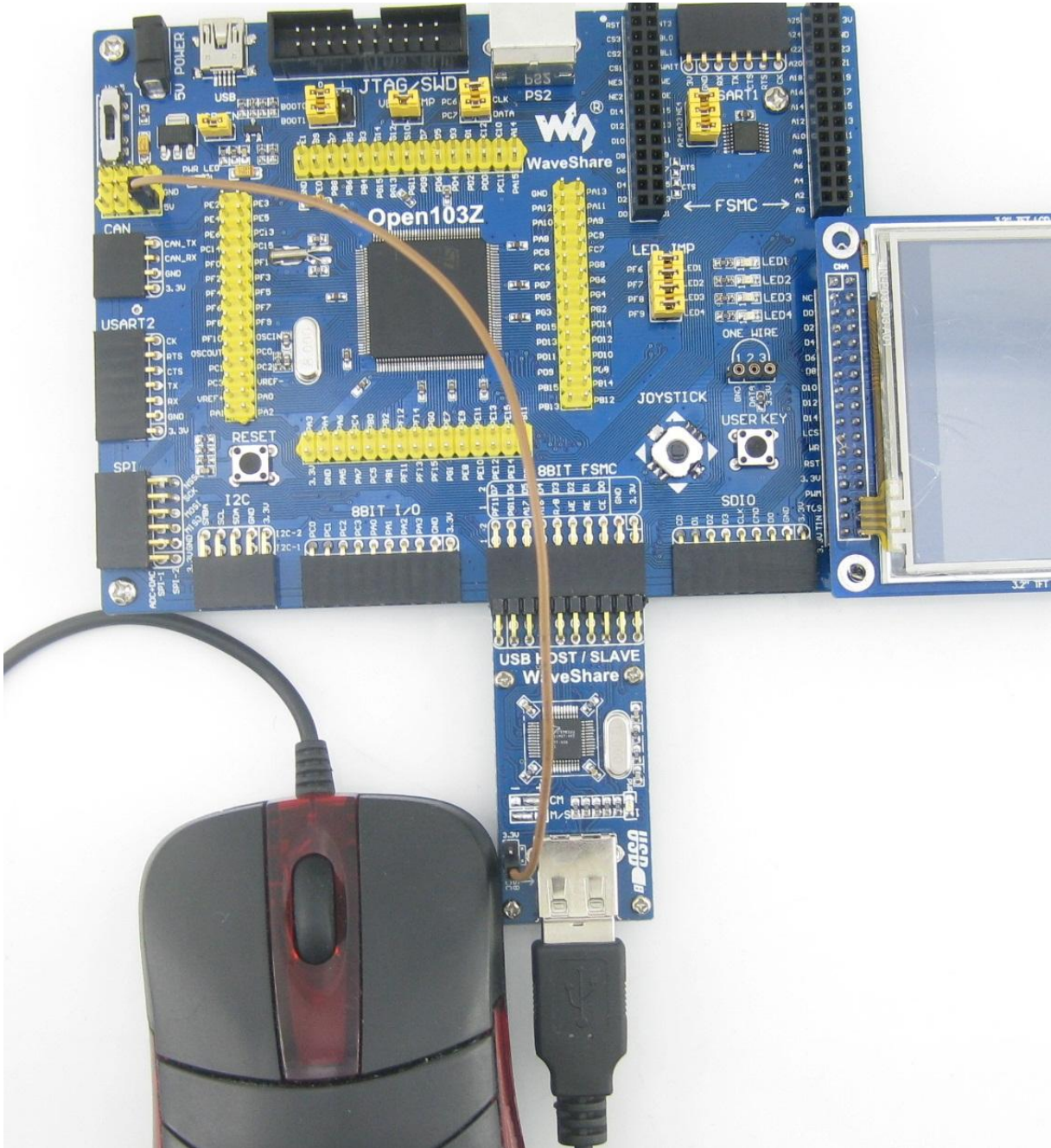
SL811 USB Board

Overview

USB HS demo

Hardware Connection

- Connect the 3.2inch 320x240 Touch LCD (A) to the board via LCD interface.
- Connect the SL811 USB Board to the board via 8BIT FSMC interface.
- Connect the mouse to the SL811 USB Board USB connector, and connect USB VCC to 5V as shown in the figure below:



Operation and Result

The LCD will display the mouse current status.

ENC28J60 Ethernet Board

Overview

ENC28J60 demo

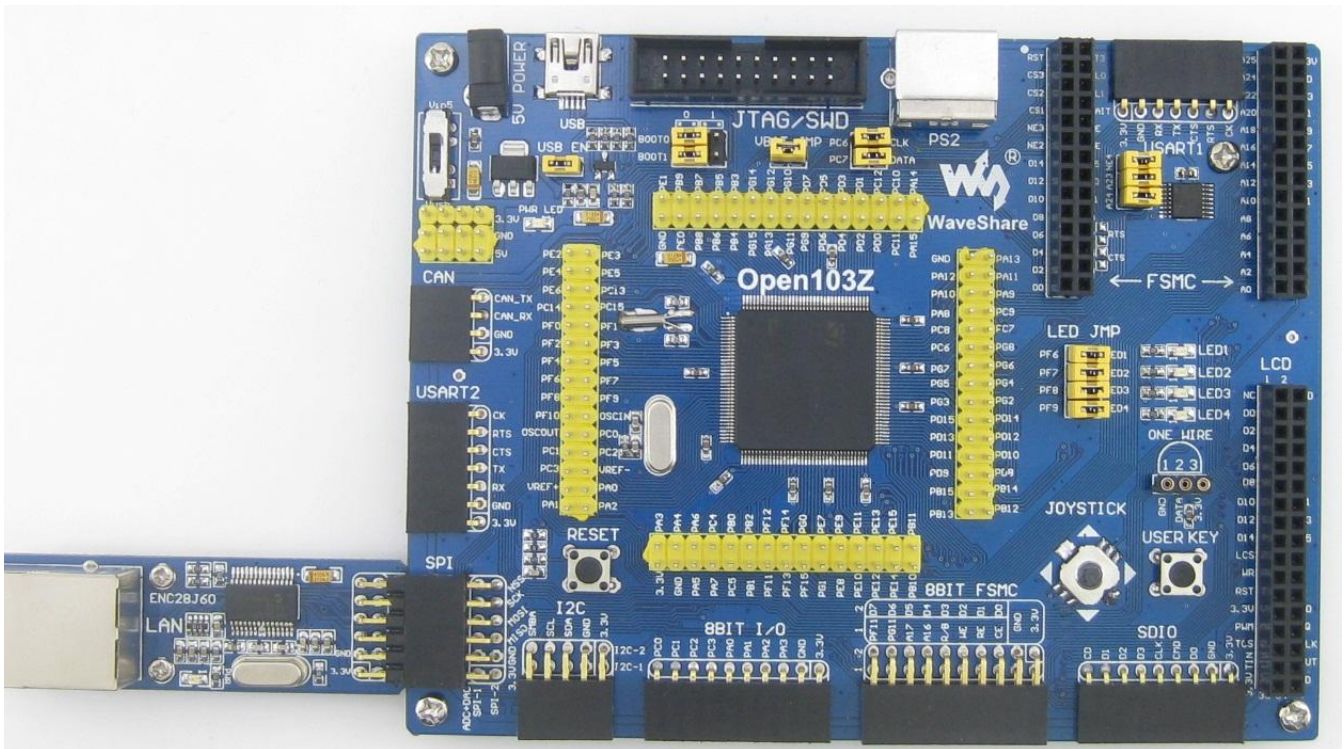
PC IP Setting

Configure the local connection of PC as follows:

```
-- IP add: 192.168.0.11  
-- NETMASK_ADDR: 255.255.255.0  
-- GW_ADDR:192.168.0.1
```

Hardware Connection

·Connect ENC28J60 Ethernet Board to the board via SPI interface, and then connect it to PC via straight-through Ethernet cable. As shown in the figure below:



Operation and Result

Enter 192.168.0.100/888 in the Internet Explorer URL bar, and then there will be a demo page.

As shown in the figure below:

Sent data to ENC28J60 : 0x0

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Open103V WEB test